

Project Startup Report

Project Name: Computer Assisted Dispatch

Agency: Adjutant General and North Dakota Highway Patrol

Business Unit/Program Area: Division of State Radio and NDHP Information Technology Department

Project Sponsor: Mike Lynk (Radio), Carrie Oswald (NDHP)

Project Manager: Justin Data (ITD)

Project Description

North Dakota's Department of Emergency Services (NDDes), Division of State Radio ("State Radio"), working with the North Dakota Highway Patrol (NDHP) has bid out and contracted via RFI/RFP process Huntsville, AL-based Intergraph Corporation's integrated Computer-Assisted Dispatch (CAD) and Mobile Data Computer (MDC) system.

CAD, a method of dispatching emergency services assisted by computer, allows personnel in a dispatch center to easily view and understand the status and location of all units being dispatched. The tools and displays of CAD allow dispatchers to handle calls-for-service as efficiently as possible, while the integrated MDC component allows data transfer and mapping capabilities between the dispatch center and the NDHP's in-vehicle computers.

Business Need or Problem

State Radio currently handles incoming 911 calls for the State of North Dakota's emergency response units. The existing dispatch process is cumbersome and inefficient in the following ways:

- Currently, incoming 911 calls require two to three personnel working together to calm the caller, get all necessary information to respond to the incident, pinpoint the location of the incident, identify the closest response unit available, and provide that unit with the location and directions to the incident.
- The dispatch process requires a lot of paper-and-pencil note-taking and searching by multiple dispatchers.
- The current dispatch process makes it difficult for personnel to see who has been dispatched around the state, and who is available for immediate response to emergency incidents.
- Dispatchers do not know if other dispatchers in other jurisdictions are also searching for the same incident location and their nearest available response units.
- Travel time to rural areas takes longer than travel time to urban areas, so dispatch response time is the only way to change the amount of time it takes to reach the many rural areas in the state.
- Emergency dispatch can be cumbersome during wildfires or other natural disasters when few dispatchers are available, but multiple incidents (increased workload) need to be handled simultaneously.
- The NDDes is not able to manage resources efficiently because of the disparate location of data necessary for analysis and statistical capability related to performance measures.
- Officers currently have no remote access or data sharing with other agencies, including the Federal level, in case of natural or large-scale disasters.
- Officers currently have to radio for assistance if they are in need of help, which takes more time than pressing an emergency key to deploy a distress signal to dispatch.
- Officers currently have access to information related to the vehicle's license plate, which does not inform them of any warrants that may be out for the driver associated with the vehicle.

Key Metrics

Project Start Date	Estimated Length of Project	Estimated Cost
June 2009	11 months	\$1,794,276

Project Startup Report

Benefits to Be Achieved	
Project Objectives	Measurement Description
Reduce dispatcher error rate by 60%	To be measured by: <ul style="list-style-type: none"> Tracking unit callback measurement Response time to 911 calls Response calls to dispatch
Increased efficiency in medical call card recording	Information that is currently distributed across two screens will be presented on one screen.
Increase the efficiency of dispatchers by a factor of .25, and allow for more incidents to be managed simultaneously.	Currently, incoming 911 calls require two to three personnel working together to: calm the caller, get information to respond to the incident, pinpoint the location of the incident, identify the closest response unit available, and provide that unit with the location and directions to the incident. With CAD and MDC, pieces of this process will be automated and therefore require fewer personnel to handle a single call.
Allow note taking related to calls to be integrated into the dispatch system.	The new system includes this functionality.
Allow for 100% tracking of emergency response units throughout the state.	Currently tracking is roughly 60%. This can be measured by verifying that all of the response unit information is available in the new system.
Consolidate incident data into one system (or at least access to the data from one system)	All incident data should be accessible from the new CAD tool.
Allow for increased data sharing between agencies.	With data becoming consolidated/accessible from one system built on a standardized data model, sharing of the system's data will be enabled.
Allow for the distribution of increased and more current information to emergency response units prior to making "first contact," thereby improving responder safety.	The response units will be able to view the same information the dispatcher views, via their mobile data computer. The new CAD system will provide the emergency responders better pre-arrival situational awareness via information from dispatch to the mobile unit (that is currently unavailable to them).
Provide state-wide situational awareness to the State Radio and NDHP.	CAD will offer command staff the ability to view statewide activity assigned to their agency.
Provide field units with remote access and data sharing through a Mobile Data Computer.	Availability of information via mobile data computer.
Store and retrieve data for real-time statistical analysis related to performance measures.	Availability of new, automated reporting tools in the CAD system. System will also have access to all the data in one system as opposed to multiple, disparate systems.
Allow for a mobile command center to be able to dispatch remotely from a disaster or other emergency site.	New system has a component (INet/Dispatcher) that allows access to CAD functionality and dispatch capability via Internet.
Improve the continuity of government operations by allowing local jurisdictions to seamlessly switch their dispatch services to another dispatch center.	This can be done by having local Public Safety Answering Points (PSAPs) switch to utilizing the State's implementation of the CAD/MDC system. (Local PSAPs have already expressed interest in achieving interconnectivity with the State's CAD/MDC system.)
Provides real-time information to the responder	The responder will be able to see what the dispatcher sees via the mobile data computer.
Cuts down on radio traffic, keeping airwaves open for other incidents to be reported	For agencies that do not have a CAD system, will have fewer problems gaining access to dispatch via the radio system during times of emergencies.

Project Startup Report

Cost/Benefit Analysis

Success factors for this project will be difficult to measure in terms of monetary value, as the primary value is in the protection to officer and public safety. However, some monetary benefits that will be realized include:

- There will be increased efficiency relating to the generation of reports, tracking data, analyzing data trends, and maintaining better data integrity. Conservatively, we estimate that this will save 40% of staff time performed to work these activities.
- Mapping and dispatch efficiencies in the system should save on response routes for emergency responders (essentially, fewer instances of responders getting lost, quicker response times possible).
- For any jurisdiction that decides to become part of the CAD system in the future, by implementing a “spoke” system off of the core State system that jurisdiction should be able to realize cost savings over their current MDC/CAD systems.

Key Constraints or Risks

- CAD may not interact with CADs that are implemented down the road by other agencies.
 - Response: The Executive Committee will identify and engage stakeholders from agencies in ND who do not have CADs but utilize emergency dispatch and may get CADs in the future.
- Initial base map will need to be replaced post-implementation of the new system.
 - Response: State is already beginning work initiating the Statewide Seamless Baseline Map project with the 2009-2011 budget allocation.
- Complexity of ND “Business Environment.” ND has some unique dispatch characteristics in that it is a State-wide dispatch process.
 - Response: Project team will continue to work toward getting as much buy-in as possible with various stakeholders throughout the State.
- Interface to existing systems: The CAD will need to interface with various other systems at State Radio, and custom interfaces will need to be developed for these.
 - Response: These interfaces have been analyzed and will be designed early in the project in order to predict any issues and mitigation plans. Unforeseen problems will be addressed immediately.

